Human Dimensions Program

FY 2000 Information Sheet

NOAA's Human Dimensions Program is soliciting research aimed at understanding how social and economic systems are influenced by fluctuations in short-term climate (seasons to years), and how human behavior can be (or why it may not be) affected based on information about variability in the climate system.

Rationale

Our objective is to sponsor research projects that consider the issue of climate-human interactions within its often complex socio-economic context in order to identify ways in which planning based on anticipation of seasonal or annual variations in precipitation and temperature can minimize disruption or provide the means to exploit opportunity. Impacts resulting from year-to-year temperature or precipitation departures from mean conditions will have direct and indirect effects on societies, influenced to varying degrees by decisions undertaken to advance economic growth and meet human needs. In order for the recent accomplishment of computer-based climate forecasts, available for some regions as much as a year or more in advance of a season, to lead to real benefit for societies, we must obtain a clearer understanding of how climate affects society, how populations prepare for and respond to climate, and where the best opportunities exist to redirect the relationship through anticipation and planning based on improved climate information. Moreover, investigating how people currently prepare for the upcoming season and how they adjust to drought, floods, fires, and other impacts of climate variability from year to year offers a natural laboratory for testing hypotheses of human coping strategies in the face of potential longer term change.

Priorities

We are interested in the extent to which individuals, institutions, or private-sector entities are capable of using or are limited in their capacity to benefit from probabilistic, early-warning climate forecast information on seasonal-to-interannual time scales (or where these forecasts are combined with regional climate information on other time scales). For instance, projects could focus on the identification of socioeconomic constraints and incentives to the actual or potential use of forecasts, analyses of how scientific information affects decision making in the public and private sectors, perceptions of probabilistic information and climatic risk, risks of acting on uncertain forecast information, liability issues associated with the production and dissemination of forecasts, who benefits and who loses as forecasts are adopted, and other issues of societal response to forecast information. In particular, research on the responses or lack of responses to the forecasts issued for the 1997-98 El Ni¯o event may offer valuable insight for future societal response and for improving the production and dissemination of forecast information.

The NOAA program has been funding several projects on the use of forecast information in the agricultural and fisheries sectors. Proposed topics in these areas should build on this work and begin to make comparisons. Areas that have not received as much attention and are encouraged include the energy sector and commodities markets.

Projects should use social science methods to focus on either simulated modeling of the potential value of climate forecasts and options for adjusting management practices and/or survey field work to analyze actual preparations for and responses to climate variability and climate forecasts.

Projects must include the following components:

1) knowledge or proposed analysis of how society currently adjusts to climatic variability;

2) analysis of how current decision-making could or why it does or does not incorporate improved information (e.g., probabilistic forecasts) about seasonal-to-interannual climate variability; including the political, institutional, economic or cultural factors that influence how decisions are made and the potential for incorporating climate forecast information into the decision process.

An important objective of the program is to provide feedback to the climate science and forecasting community on the level of usefulness of the current information being produced and how the information could be more effectively communicated and disseminated. Thus, investigators are encouraged to consider developing a plan for determining how best to provide feedback on the insights/results from their research projects to members of the forecasting community, such as those at NOAA's Climate Prediction Center or the International Research Institute (IRI) for climate prediction.

At the request of NOAA, the National Research Council (NRC) of the National Academy of Sciences recently developed a science plan for the area of the human dimensions of seasonal-to-interannual climate variability. The published NRC plan, Making Climate Forecasts Matter, lays out the state of knowledge and a series of critical research questions, and it provides a valuable set of references. All researchers interested in the NOAA Human Dimensions program are highly encouraged to read this book, particularly chapter six on Scientific Priorities. The full book is now available on the National Academy Press web site at http://books.nap.edu/catalog/6370.html.

Proposal Submission

The full guidelines for proposal submission can be found in the NOAA FY 2000 call for proposals for its Climate and Global Change Grants Program (http://ww.ogp.noaa.gov). However, investigators are advised to include the following information in their proposals.

Proposals should sufficiently build on what is already known from the published literature about the proposed topic (e.g., value of climate information, decision-making under uncertainty, use/transfer of new scientific information, integrated modeling of natural and human systems, sectoral analyses.) Linkages to the use of specific information derived from climate prediction should be discussed explicitly; however, physical science components aimed at improving climate forecasts will not be supported.

Because of the interdisciplinary nature of the program and the proposals we receive, it is essential that investigators describe in extensive detail the proposed methodology and how it will be accomplished. Investigators need to be explicit about hypotheses to be tested, data to be collected, analyses to be performed, components of any proposed modeling, and expected output for theoretical advancement of the topic area. For proposals from a team of researchers, a plan which includes the roles of the investigators and how the team will interact and integrate the multiple components must be clearly specified.

Competition for funding this past year was very strong. Out of approximately seventy-nine letters of intent, thirty-three full proposals were encouraged for submission. Of the thirty-three proposals submitted, only eight were selected for funding. Program funds are expected to be extremely limited again. The average funding level is about $100K per year. Applicants are encouraged not to exceed requests of $150K per year for multi–year projects. For further information contact program management: Caitlin Simpson, 1100 Wayne Avenue, Suite 1225, Silver Spring, MD 20910; telephone: (301) 427-2089 ext 152; or e-mail: Caitlin.Simpson@noaa.gov.

Abstracts from awards of previous years and project summaries from a recent principal investigators meeting are available at the web site: http://www.ogp.noaa.gov/mpe/csi/econhd/fundproj.htm.

Related Information on Climate Prediction

A current list of ENSO prediction papers is maintained at the following University of Washington web site: http://www.atmos.washington.edu/tpop/pop.htm.